UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN BREWER, DAVID BROWN,
and SVEND RUMBOLD

Appeal 2007-1686
Application 09/493,350
Technology Center 1700

Decided: August 15, 2007

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-12. Claim 1 is illustrative:

1. A furnace for cracking at least two separate and independent hydrocarbon feeds to produce olefins, said furnace comprising:

(a) at least one fired radiant chamber, wherein said radiant chamber is divided into at least two separate independent radiant zones by a fired radiant chamber dividing means:

(b) at least one radiant burner in each said separate independent radiant zone of said fired radiant chamber;

(c) a convection chamber in direct communication with each said fired radiant chamber;

(d) a separate and independent process coil for each said separate independent radiant zone for cracking each said separate and independent feedstock, wherein each said separate and independent process coil extends through at least a portion of said convection chamber and extends into one of said separate and independent radiant zones for separately and independently cracking said separate and independent feedstocks to olefins before exiting said furnace;

(e) a flue for discharging flue gas located at the top of said convection chamber of said furnace; and

(f) a means for independently controlling the radiant burner in each said separate independent radiant zone.

The Examiner relies upon the following references:

Thompson	US 2,323,498	Jul. 6, 1943
Kushch ('661)	US 5,711,661	Jan. 27, 1998
Kushch ('001)	US 6,159,001	Dec. 12, 2000

Appellants' claimed invention is directed to a furnace that is suitable for cracking two separate hydrocarbon feeds in the production of olefins. The furnace comprises a fired radiant chamber that is divided into at least two separate radiant zones by a dividing means.

Appealed claims 1, 3, 5, 9, and 10 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Thompson. Claims 2, 4, 8, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thompson, whereas claims 6, 7, 11, and 12 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thompson in view of the patents to Kushch.

Appellants have not separately argued any particular claim in the separately rejected groups of claims. Accordingly, the groups of claims, as separately rejected, stand or fall together.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in full agreement with the Examiner that the claimed subject matter is unpatentable over the cited prior art. Accordingly, we will sustain the Examiner's rejections for the reasons set forth in the Answer, which we incorporate herein, and we add the following for emphasis only.

Appellants do not dispute the Examiner's factual determination that Thompson, like Appellants, discloses a furnace comprising a fired radiant chamber divided into two separate, independent radiant zones, a burner in each zone, a convection chamber in communication with the radiant chamber, an independent process coil for each zone which extends through a portion of the convection chamber, a flue for discharging flue gas, means for independently controlling the radiant burners in each zone, and a dividing means for separating the radiant chamber.

The principal argument advanced by Appellants is that because the coils 10 and 10′ of Thompson communicate with the same inlet/outlet 11, the apparatus of Thompson forms "one continuously connected fluid conduit that is incapable of cracking two separate and independent feedstocks at the same time" (principal Brief 4, second para., emphasis added). Appellants maintain that the configuration of Thompson "simply cannot separately process more than one feedstock at a time because the coils are all connected to reciprocal manifolds" (*id.*).

We, like the Examiner, find that Appellants' principal argument is not germane to the claimed subject matter inasmuch as the appealed claims do not recite that two feedstocks are received by the apparatus at the same time. Rather, the appealed claims embrace within their scope a furnace wherein one feedstock is fed into one radiant zone and then, subsequently, another feedstock is fed into the other radiant zone. Manifestly, the apparatus of Thompson is fully capable of performing this operation. Moreover, we fully agree with the Examiner that two separate and independent feedstocks can be introduced into the apparatus of Thompson through inlets 12 and 12′ at the same time (*see* col. 2, ll. 1 *et seq.* for the disclosure that 12 and 12′ can be inlets). The furnace of Thompson is fully capable of receiving separate feeds into inlets 12 and 12′, forming different products in chambers 7 and 7′, and discharging a mixture of the products through outlet 11. Such an apparatus is within the scope of the appealed claims.

Hence, we do not subscribe to Appellants' argument that the apparatus of Thompson is "incapable of processing separate and independent feedstocks without mixing the feeds together as called for in the present claimed invention" (principal Br. 5, second para.). Moreover, this argument is also not germane to the claimed subject matter since the appealed claims do not preclude an apparatus which mixes the feedstocks at some point.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

clj

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